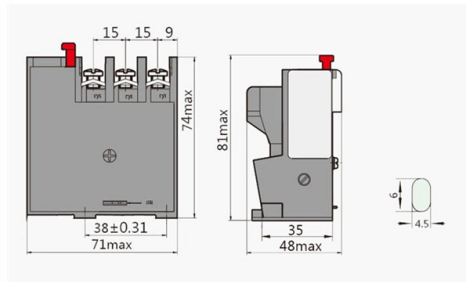


Model Specifications and Dimensions of Level 3 Distribution Box



Overview

The correct choice and installation of distribution boxes are crucial for electrical safety, efficiency, and reliability.

Key Takeaways

A Level 3 Distribution Box is typically an outdoor LT distribution unit with IP55 protection, fabricated from 2 mm GI sheet steel, featuring copper busbars, multiple MCCB arrangements, and secure locking mechanisms.

Level 3 Distribution Boxes are generally outdoor-type LT distribution cabinets designed for 4 kV substations and low-voltage applications. The body is fabricated from 2 mm galvanized iron (GI) sheet steel with reinforced channels for structural integrity. The roof is slightly slanting with a 50 mm overhang at the front and back to prevent water ingress. Doors feature Godrej Type 3-position locking systems with concealed hinges, and the box includes two solid earthing points on either side for safety .

Electrical Specifications

- Busbars: Copper flat busbars, typically 25x4 mm, with heat-shrinkable insulation tubing in red, yellow, blue, and black for phase identification. Alternative phase-colored paint may be used .
- Incoming/Outgoing Feeders: Provision for one busbar arrangement with 4-pole MCCB and one outgoing feeder with 2 sets of 3-pole MCCBs for 100 kVA LTDBs .
- Voltage Rating: Maximum withstand voltage of 600 V .

- Current Rating: Busbars sized according to load, e.g., 140A (70 mm²), 200A, and up to 250A (95 mm²), .
 - Temperature: Safe working temperature around 80°C for the outer box and 100°C for metallic busbars .
 - Ingress Protection: Minimum IP55, ensuring dust and water resistance .
- Materials and Safety Features
- Outer Box: High-strength GI steel or polymer with UV protection and flame-retardant properties (HB/V0 grade), .
 - Cable Glands: Heavy-duty, double compression type made of brass .
 - Busbar Insulation: Polyamide or PVC sleeves with standard color coding .
 - Locking System: Special lock and key arrangement with sealing provision for complete protection .

Dimensions

While exact dimensions vary by manufacturer and capacity, typical Level 3 Distribution Boxes are designed to accommodate 1-way to 36-way arrangements. The length, width, and height are specified in technical catalogues and depend on the number of outgoing feeders and MCCB arrangements . For example, a 100 kVA LTDB may have sufficient internal clearance to house busbars, MCCBs, and cable entries while maintaining compliance with IEC and I.E. rules .

Standards and Compliance

- IEC 60439-3: For low-voltage switchgear and controlgear assemblies .
- CPRI or Government-approved type testing: Required for IP55 certification .
- UL 94: Flame retardancy for polymer components .
- IS:13411: For isolator and switch disconnector specifications . Level 3 Distribution Boxes are engineered for durability, safety, and ease of installation, suitable for residential, commercial, and industrial applications requiring reliable low-voltage distribution.

Article Content

Complete Guide For Distribution Boxes Types

The correct choice and installation of distribution boxes are crucial for electrical safety, efficiency, and reliability. This guide provides

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This document is for preliminary research. Verify specifications against current standards, product documentation and project requirements.

